

**Amendment to the Claims:**

Please amend the claims as follows:

Claim 1 (Currently Amended): A homogeneous liquid low molecular weight ethylene/alpha-olefin polymer having[[:]];:

- a) a number average molecular weight (Mn)<sub>n</sub> as determined by gel permeation chromatography, of less than 25,000;
- b) a total crystallinity, as measured by DSC, of less than 10%;
- c) a pour point<sub>n</sub> as measured by ASTM D97<sub>n</sub> of less than 50°C.

Claim 2 (Currently Amended): The homogeneous liquid low molecular weight ethylene/alpha-olefin polymer of Claim 1, wherein said polymer is a copolymer of ethylene and at least one comonomer selected from the group consisting of ethylenically unsaturated monomers, conjugated or nonconjugated dienes, and polyenes, and wherein the polymer has[[:]];:

- a) a number average molecular weight (Mn)<sub>n</sub> as determined by gel permeation chromatography, of less than 15,000;
- b) a comonomer incorporation of greater than 15 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 7%; and
- c) a pour point<sub>n</sub> as measured by ASTM D97<sub>n</sub> of less than 40°C.

Claim 3 (Currently Amended): The homogeneous liquid low molecular weight ethylene/alpha-olefin polymer of Claim 1, wherein said comonomer is an ethylenically unsaturated monomer selected from the group consisting of the C<sub>3</sub>-C<sub>20</sub> α-olefins, styrene, alkyl-substituted styrene, vinylbenzocyclobutane, 1,4-hexadiene, and naphthenics, and wherein the polymer has[[:]];:

- a) a number average molecular weight (Mn)<sub>n</sub> as determined by gel permeation chromatography, of less than 11,000;
- b) a comonomer incorporation of greater than 30 mol percent;
- c) a total crystallinity<sub>n</sub> as measured by DSC<sub>n</sub> of less than 5%; and

d) a pour point<sub>2</sub> as measured by ASTM D97<sub>2</sub> of less than 25°C.

Claim 4 (Currently Amended): The homogeneous liquid low molecular weight ethylene/alpha-olefin polymer of Claim 1, wherein the comonomer is an ethylenically unsaturated monomer<sub>1</sub> which is a C<sub>3</sub>-C<sub>20</sub>  $\alpha$ -olefin, and wherein the  $\alpha$ -olefin is further selected from the group consisting of 1-propene, isobutylene, 1-butene, 1-hexene, 1-heptene, 4-methyl-1-pentene, and 1-octene; and wherein the polymer has[:];

- a) a number average molecular weight (Mn)<sub>1</sub> as determined by gel permeation chromatography, of less than 9,000;
- b) a comonomer incorporation of greater than 40 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 2%; and
- d) a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 15°C.

Claim 5 (Currently Amended): The homogeneous liquid low molecular weight ethylene/alpha-olefin ~~polymer polymers~~ of Claim 4, wherein the comonomer is an ethylenically unsaturated monomer<sub>1</sub> which is selected from the group consisting of propylene and 1-octene; and wherein the polymer has[:];

- a) a comonomer incorporation of greater than 50 mol percent; and
- b) a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 0°C.

Claim 6 (Currently Amended): A process comprising reacting ethylene and at least one ethylenically unsaturated comonomer at a reaction temperature of at least 80°C<sub>1</sub> in the absence of hydrogen<sub>1</sub> and in the presence of a single site catalyst<sub>1</sub> to form a homogeneous liquid low molecular weight ethylene/alpha-olefin polymer having[:];

- a) a number average molecular weight (Mn)<sub>1</sub> as determined by gel permeation chromatography, of less than 25,000;
- b) a comonomer content of greater than 15 mol percent;

- c) a total crystallinity, as measured by DSC, of less than 10%;
- d) a pour point, as measured by ASTM D97, of less than 50°C.

Claim 7 (Currently Amended): A pour-point reducing additive comprising a homogeneous liquid low molecular weight ethylene/alpha-olefin polymer having[(:)];

- a) a number average molecular weight (Mn), as determined by gel permeation chromatography, of less than 25,000;
- b) a total crystallinity, as measured by DSC, of less than 10%;
- c) a pour point, as measured by ASTM D97, of less than 50°C.

Claim 8 (Currently Amended): The pour-point reducing additive of Claim 7, wherein said homogeneous liquid low molecular weight ethylene/alpha-olefin polymer is a copolymer of ethylene and at least one comonomer, selected from the group consisting of ethylenically unsaturated monomers, conjugated or nonconjugated dienes, and polyenes, and wherein the polymer has[(:)];

- a) a number average molecular weight (Mn), as determined by gel permeation chromatography, of less than 15,000;
- b) a comonomer incorporation of greater than 15 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 7%; and
- e) d) a pour point, as measured by ASTM D97, of less than 40°C.

Claim 9 (Currently Amended): The pour-point reducing additive of Claim 7, wherein said homogeneous liquid low molecular weight ethylene/alpha-olefin polymer is a copolymer of an ethylenically unsaturated monomer selected from the group consisting of the C<sub>3</sub>-C<sub>20</sub> α-olefins, styrene, alkyl-substituted styrene, vinylbenzocyclobutane, 1,4-hexadiene, and naphthenics, and wherein the polymer has[(:)];

- a) a number average molecular weight (Mn) as determined by gel permeation chromatography, of less than 11,000;

- b) a comonomer incorporation of greater than 30 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 5%; and
- d) a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 25°C.

Claim 10 (Currently Amended): The pour-point reducing additive of Claim 7<sub>1</sub> wherein said homogeneous liquid low molecular weight ethylene/alpha-olefin polymer is a copolymer of an ethylenically unsaturated monomer<sub>1</sub> which is a C<sub>3</sub>-C<sub>20</sub> α-olefin, and wherein the α-olefin is further selected from the group consisting of 1-propene, isobutylene, 1-butene, 1-hexene, 1-heptene, 4-methyl-1-pentene, and 1-octene; and wherein said polymer has[(:)];

- a) a number average molecular weight (Mn)<sub>1</sub> as determined by gel permeation chromatography, of less than 9,000;
- b) a comonomer incorporation of greater than 40 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 2%; and
- d) a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 15°C.

Claim 11 (Currently Amended): The pour-point reducing additive of Claim 9<sub>1</sub> wherein said homogeneous liquid low molecular weight ethylene/alpha-olefin polymer is a copolymer of an ethylenically unsaturated monomer<sub>1</sub> which is selected from the group consisting of propylene and 1-octene; and wherein the polymer has[(:)];

- a) a comonomer incorporation of greater than 50 mol percent; and
- b) a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 0°C.

Claim 12 (Currently Amend): A synthetic oil for use as a lubricant oil, and comprising the liquid low molecular weight ethylene/alpha-olefin polymer of Claim 1, and wherein said oil has ~~having~~ a kinematic viscosity at 100°C of 4 to 200 centistokes.

Claim 13 (Currently Amended): A homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer having[:];

- a) a number average molecular weight ( $M_n$ ), as determined by gel permeation chromatography, of less than 25,000;
- b) a total crystallinity, as measured by DSC, of less than 50%; and
- c) a pour point, as measured by ASTM D97, of less than 90°C.

Claim 14 (Currently Amended): The homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer of Claim 13, wherein said polymer is a copolymer of ethylene and at least one comonomer selected from the group consisting of ethylenically unsaturated monomers, conjugated or nonconjugated dienes, and polyenes, and wherein the polymer has[:];

- a) a number average molecular weight ( $M_n$ ), as determined by gel permeation chromatography, of less than 15,000;
- b) a comonomer incorporation of greater than 10 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 40%; and
- c) a pour point, as measured by ASTM D97, of less than 80°C.

Claim 15 (Currently Amended): The homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer of Claim 13, wherein said comonomer is an ethylenically unsaturated monomer selected from the group consisting of the C<sub>3</sub>-C<sub>20</sub>  $\alpha$ -olefins, styrene, alkyl-substituted styrene, vinylbenzocyclobutane, 1,4-hexadiene, and naphthenics, and wherein the polymer has[:];

- a) a number average molecular weight ( $M_n$ ), as determined by gel permeation chromatography, of less than 11,000;
- b) a comonomer incorporation of greater than 12 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 30%; and
- d) a pour point, as measured by ASTM D97, of less than 70°C.

Claim 16 (Currently Amended): The homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer of Claim 13, wherein the comonomer is an ethylenically unsaturated monomer, which is a C<sub>3</sub>-C<sub>20</sub> α-olefin, and wherein the α-olefin is further selected from the group consisting of 1-propene, isobutylene, 1-butene, 1-hexene, 1-heptene, 4-methyl-1-pentene, and 1-octene; and wherein the polymer has[[:]];:

- a) a number average molecular weight (Mn)<sub>n</sub> as determined by gel permeation chromatography, of less than 9,000;
- b) a comonomer incorporation of greater than 13 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 20%; and
- d) a pour point<sub>n</sub> as measured by ASTM D97<sub>n</sub> of less than 60°C.

Claim 17 (Currently Amended): The homogeneous gel-like low molecular weight ethylene/alpha-olefin polymers of Claim 16, wherein the comonomer is an ethylenically unsaturated monomer, which is selected from the group consisting of propylene and 1-octene; and wherein the polymer has[[:]];:

- a) a comonomer incorporation of greater than 15 mol percent; and
- b) a pour point as measured by ASTM D97 of less than 40°C.

Claim 18 (Currently Amend): A process comprising reacting ethylene and at least one ethylenically unsaturated comonomer, at a reaction temperature of at least 80 °C<sub>n</sub> in the absence of hydrogen<sub>n</sub> and in the presence of a single site catalyst<sub>n</sub> to form a homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer having:

- a) a number average molecular weight (Mn)<sub>n</sub> as determined by gel permeation chromatography, of less than 25,000;
- b) a comonomer content of greater than 10 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 50%;
- d) a pour point<sub>n</sub> as measured by ASTM D97<sub>n</sub> of less than 90°C.

Claim 19 (Currently Amend): A pour-point reducing additive comprising a homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer having:

- a) a number average molecular weight ( $M_n$ )<sub>1</sub> as determined by gel permeation chromatography, of less than 25,000;
- b) a total crystallinity, as measured by DSC, of less than 50%;
- c) a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 90°C.

Claim 20 (Currently Amended): The pour-point reducing additive of Claim 19<sub>1</sub> wherein said homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer is a copolymer of ethylene and at least one comonomer selected from the group consisting of ethylenically unsaturated monomers, conjugated or nonconjugated dienes, and polyenes, and wherein the polymer has[[:]];]

- a) a number average molecular weight ( $M_n$ )<sub>1</sub> as determined by gel permeation chromatography, of less than 15,000;
- b) a comonomer incorporation of greater than 10 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 40%; and
- e) d a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 80°C.

Claim 21 (Currently Amended): The pour-point reducing additive of Claim 19<sub>1</sub> wherein said homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer is a copolymer of ethylene and a comonomer<sub>1</sub> wherein said comonomer is an ethylenically unsaturated monomer selected from the group consisting of the C<sub>3</sub>-C<sub>20</sub>  $\alpha$ -olefins, styrene, alkyl-substituted styrene, vinylbenzocyclobutane, 1,4-hexadiene, and naphthenics, and wherein the polymer has[[:]];]

- a) a number average molecular weight ( $M_n$ )<sub>1</sub> as determined by gel permeation chromatography, of less than 11,000;
- b) a comonomer incorporation of greater than 12 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 30%; and

d) a pour point<sub>1</sub> as measured by ASTM D97<sub>1</sub> of less than 70°C.

Claim 22 (Currently Amended): The pour-point reducing additive of Claim 19<sub>1</sub> wherein said homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer is a copolymer of an ethylenically unsaturated monomer<sub>2</sub> which is a C<sub>3</sub>-C<sub>20</sub> α-olefin, and wherein the α-olefin is further selected from the group consisting of 1-propene, isobutylene, 1-butene, 1-hexene, 1-heptene, 4-methyl-1-pentene, and 1-octene; and wherein said polymer has[(:)]<sub>2</sub>

- a) a number average molecular weight (Mn)<sub>2</sub> as determined by gel permeation chromatography, of less than 9,000;
- b) a comonomer incorporation of greater than 13 mol percent;
- c) a total crystallinity, as measured by DSC, of less than 20%; and
- d) a pour point<sub>2</sub> as measured by ASTM D97<sub>2</sub> of less than 60°C.

Claim 23 (Currently Amended): The pour-point reducing additive of Claim 22<sub>1</sub> wherein said homogeneous gel-like low molecular weight ethylene/alpha-olefin polymer is a copolymer of an ethylenically unsaturated monomer<sub>2</sub> which is selected from the group consisting of propylene and 1-octene; and wherein the polymer has[(:)]<sub>2</sub>

- a) a comonomer incorporation of greater than 15 mol percent; and
- b) a pour point<sub>2</sub> as measured by ASTM D97<sub>2</sub> of less than 40°C.

Claim 24 (Currently Amend): A synthetic oil for use as a lubricant oil, and comprising the gel-like low molecular weight ethylene/alpha-olefin polymer of Claim 13, and wherein said oil has ~~having~~ a kinematic viscosity at 100°C of 4 to 200 centistokes.